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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,479	08/14/2006	William Veronesi	60469-092PUS1;PA-000.0519	8352
64779 7590 02/26/2008 CARLSON GASKEY & OLDS 400 W MAPLE STE 350 BIRMINGHAM, MI 48009				
EXAMINER				
WEST, JEFFREY R				
ART UNIT		PAPER NUMBER		
2857				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/589,479

**Applicant(s)**

VERONESI ET AL.

**Examiner**

JEFFREY R. WEST

**Art Unit**

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 21-24 is/are allowed.
- 6) ☒ Claim(s) 16 and 20 is/are rejected.
- 7) ☒ Claim(s) 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0194935 to Clarke et al. in view of U.S. Patent No. 7,237,656 to Barrett et al.

With respect to claim 16, Clarke discloses a system for determining a condition of an elevator tensile support (0022, lines 2-4) comprising a device for measuring an electrical characteristic of at least a portion of a tensile support (0021, lines 1-11)

and a controller that determines a current condition of the tensile support (0028, line 1 to 0029, line 3) by relating the measured characteristic to a predetermined data set indicating a relationship between corresponding apparent characteristic values and conditions of the tensile support, the relationship being based upon load information (0028, lines 1-11)

With respect to claim 20, Clarke discloses that the electrical characteristic is resistance (0028, lines 1-2).

As noted above, the invention of Clarke teaches many of the features of the claimed invention and while the invention of Clarke does teach relating the measured characteristic to a predetermined data set including a relationship between corresponding apparent characteristic values and conditions of the tensile support, wherein the relationship is based upon load information, Clarke does not explicitly indicate that the relationship is based on a determined rate of degradation for the selected load.

Barrett teaches an elevator load weighting device including means for positioning a selected load on a plurality of tension members (column 2, lines 1-6 and column 3, lines 4-9) and determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation varies over time based on how much of the selected load is carried by each tension member (column 3, lines 10-16).

It would have been obvious to one having ordinary skill in the art to modify the invention of Clarke to explicitly indicate that the relationship is based on a

determined rate of degradation for the selected load because the invention of Clarke does determine degradation of a tensile support based on a measured resistance and load information and Barrett suggests that the combination would have improved the degradation analysis of Clarke by using the load information to determine how stretching/degradation varies over time thereby allowing Clarke to better predict when such stretching/degradation will result in support failure (column 3, lines 10-16).

4. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0046540 to Robar et al. in view of U.S. Patent No. 7,237,656 to Barrett et al.

With respect to claim 16, Robar discloses a system for determining a condition of an elevator tensile support (0001, lines 1-4) comprising a device for measuring an electrical characteristic of at least a portion of a tensile support (0007, lines 6-9) and a controller that determines a current condition of the tensile support (0047, lines 1-7) by relating the measured characteristic to a predetermined data set indicating a relationship between corresponding apparent characteristic values and conditions of the tensile support, the relationship being based upon load information (0049, lines 1-8).

With respect to claim 20, Robar discloses that the electrical characteristic is resistance (0007, lines 6-9).

As noted above, the invention of Robar teaches many of the features of the

claimed invention and while the invention of Robar does teach relating the measured characteristic to a predetermined data set including a relationship between corresponding apparent characteristic values and conditions of the tensile support, wherein the relationship is based upon load information, Robar does not explicitly indicate that the relationship is based on a determined rate of degradation for the selected load.

Barrett teaches an elevator load weighting device including means for positioning a selected load on a plurality of tension members (column 2, lines 1-6 and column 3, lines 4-9) and determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation varies over time based on how much of the selected load is carried by each tension member (column 3, lines 10-16).

It would have been obvious to one having ordinary skill in the art to modify the invention of Robar to explicitly indicate that the relationship is based on a determined rate of degradation for the selected load because the invention of Robar does determine degradation of a tensile support based on a measured resistance and load information and Barrett suggests that the combination would have improved the degradation analysis of Robar by using the load information to determine how stretching/degradation varies over time thereby allowing Robar to better predict when such stretching/degradation will result in support failure (column 3, lines 10-16).

***Allowable Subject Matter***

5. Claims 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and claims 1-15 and 21-24 are considered to be allowable over the cited prior art because none of the cited prior art teaches or suggests, in combination with the other claimed limitations, determining a mean degradation of a tensile support from a determined rate of degradation of the tensile support for a selected load and determined sheave contact and load information, wherein the sheave contact and load information are determined using a modeled configuration of at least one selected elevator system and an estimated elevator traffic pattern.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U.S. Patent No. 6,123,176 to O'Donnell et al. teaches a rope tension monitoring assembly and method wherein monitoring the load carried by each rope provides an indication of the level of degradation of each rope.

U.S. Patent No. 6,405,833 to Baranda et al. teaches a flexible flat rope sheave assembly with separate shoulder and flange surfaces having varying friction properties as well as that the degradation of a tensile support depends on sheave contact information (column 1, lines 44-49).

U.S. Patent No. 6,752,029 to Madden et al. teaches a load measurement device.

U.S. Patent No. 6,662,660 to Smith teaches an apparatus for testing aramid fiber elevator cables.

U.S. Patent No. 5,804,964 to Hamelin et al. teaches a wire rope damage index monitoring system.

U.S. Patent No. 6,247,359 to De Angelis teaches an apparatus for identification of need to replace synthetic fiber ropes.

U.S. Patent No. 6,133,731 to Melamud et al. teaches a method and apparatus for the on-line measurement of the strength of metal cables.

U.S. Patent No. 5,821,430 to Kwun et al. teaches a method and apparatus for conducting in-situ nondestructive tensile load measurements in cables and ropes.

JP Patent Application Publication No. 2001-302135 to Kato et al. teaches a discrimination method of deterioration state of a rope and elevator using the same.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY R. WEST whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey R. West/  
Primary Examiner, Art Unit 2857

February 27, 2008